

**NEW** Over 50 New Features and Enhancements including . . .

### 3 Axis Milling

- Adaptive roughing strategy for high speed machining can reduce machining time up to 40% over conventional roughing with less wear.
- Z Level / Constant Stepper combination toolpath.
- Z Level helical milling.
- Radial and Slice tangent toolpath extensions.
- New methods for defining Rapid plane.
- Additional control over level averaging for Area Clearance and Z Level operations.
- Trim below ramp linking option in Z Level.
- Pencil Mill slope machining option.
- 3 Axis toolpaths check for invalid arcs, continuity and gouging.
- Use pre-drilled entry points for Area Clearance and Flat Area operations.

### Technology Database

- Assign feeds and speeds by tool.
- Definable coolant conditions for tools.
- Define diameter and length offsets for tools
- Default descriptions for operations.

### Multiaxis Machining

- Improved speed and toolpath reliability.

### Assembly Mode

- Support for CAMWorks configurations.

### 2.5 Axis Milling

- AFR enhancements: Improved speed; Local Feature Recognition based on user-selected faces; additional hole conditions detected; improved end condition definition.
- Offset roughing pattern.
- For Contour Mill operations, options for toolpath diameter compensation, leadins/outs for Curve features and the ability to define the side to machine.
- Improved spline deviation control.
- Additional corner types for Contour Mill toolpaths for high speed machining.
- Arc fitting for Rough, Contour and Face Mill operations generates faster, smaller toolpaths.

### Simulation

- Improved user interface for setting speed and quality.
- Improved simulation speed and quality.

### Posting

- APL CL milling output for external third-party post processors.
- Additional commands and variables to support new features.

### API Support

- Added functionality for advanced customization.

### Turning

- Improved Automatic Feature Recognition.
- Feed the tool to a user-defined diameter and retract for turn finish.
- Automated multi-start thread creation.
- Back facing for Face Rough and Finish.
- User-defined plunge angle for Face Rough and Finish.
- User-defined lead angle when rough and finish turning with a groove tool.
- Arc fitting for Turn Rough and Finish.

### Wire EDM

- Internal and external corner types for 2 Axis Contour operations.
- Process a punch as a die and a die as a punch.
- Add stock allowance to toolpaths.

### Usability & Interface Enhancements

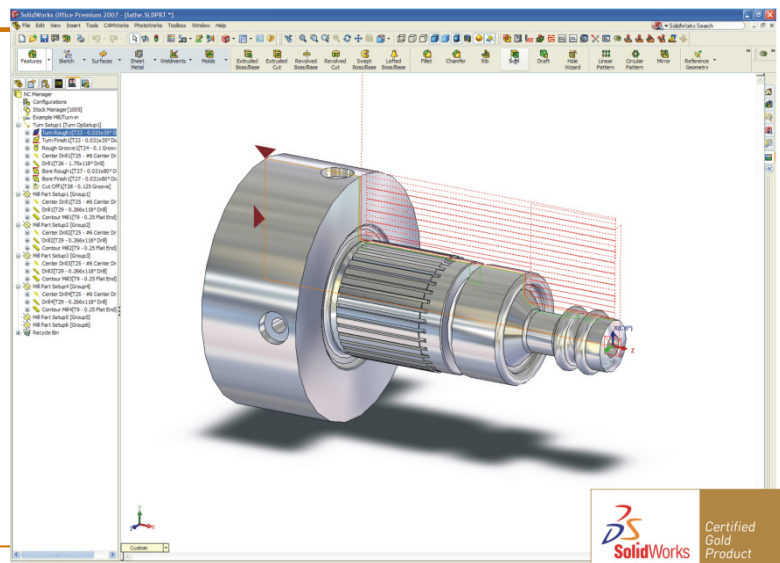
- Quickly locate all operations using the same tool.
- Add description for tree items and customize names and descriptions.
- Split panel option displays the FeatureManager design tree when editing CAMWorks tree items.
- Permanently delete tree items.
- Support for rebuilding setups when setup vector changes.

## #1 CAM Solution for SolidWorks

CAMWorks was the first fully integrated CAM solution designed exclusively to operate in SolidWorks.

This close integration means:

- CAMWorks machining trees and commands are available in SolidWorks with the click of a button. You never have to leave SolidWorks to generate toolpaths.
- CAMWorks uses the same SolidWorks geometry to generate toolpaths to ensure the part you machine is the same part you have modeled.
- Time-consuming file transfers using standard file formats such as IGES and SAT are eliminated.

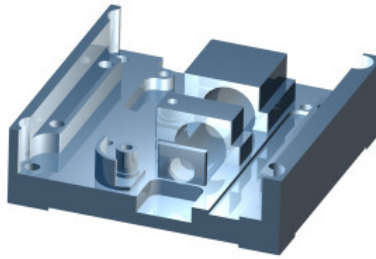


### Best-in-Class Choice

The latest innovations in CAMWorks together with SolidWorks excellence in design allow manufacturers to engineer, design and build better products faster and more accurately. This new generation CAM software has automatic feature recognition, automatic operations planning and a knowledge-based Technology Database.

### ▶ Automatic Feature Recognition

CAMWorks is a feature-based CAM system. To make feature-based machining even more powerful, CAMWorks provides the ability to automatically recognize many prismatic features including tapers. Manufacturing View, a new generation of AFR, finds additional features types and allows non-hole features to be edited.



### ▶ Interactive Feature Recognition

Interactive Feature wizards are used for defining features that are not recognized automatically or features that need to be defined for your facility's machining requirements. Similar 2½ Axis and Multi Surface features can be created quickly using the Copy command. Existing features can be modified easily.

### ▶ Knowledge-Based Machining

The knowledge-based Technology Database (TechDB) is the intelligence behind the machining automation in CAMWorks. The TechDB is shipped with data that is generally applicable to most machining environments. You can modify the data to represent the processes for your recognizable machinable features including tools, standard feeds, speeds and cut depths that you use. CAMWorks will automatically use the processes that you have set up in the TechDB.

The machining information in the database includes these categories:

- Machine - "Virtual" machines for all your CNC machines and the associated controller and tool crib.
- Tools - The tool library can contain all the tools in your facility.
- Cutting Parameters - Data for calculating feed rates, spindle speed, stock materials, tool materials.
- Feature and Operations - Machining sequences and operations for each combination of feature type, end condition and size.

### ▶ Machining Operations

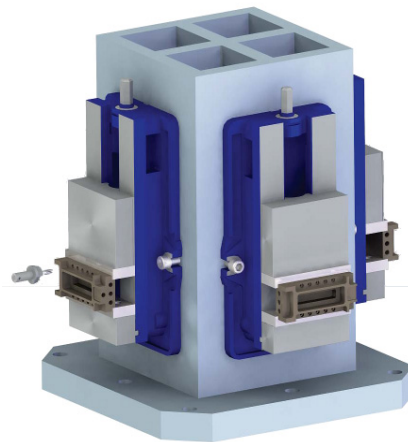
After defining machinable features, it is time to take advantage of CAMWorks machining automation to generate operations to machine the features. Operations include roughing, finishing, drilling, etc. The TechDB associates operation parameters to the machinable features. When you generate operations, CAMWorks applies these settings automatically and the operations display in the tree. Operation parameters can be modified before or after generating toolpaths.

### ▶ Assembly Mode for Milling

CAMWorks leverages the power and flexibility of SolidWorks Assembly mode to support NC programming of multiple parts for production machining and to more accurately represent the machining environment.

Some of the key benefits include:

- The entire machining environment can be modeled including clamps, fixtures, components, parts, stock.
- Multiple copies of a part can be positioned in the assembly document and machined with CAMWorks.
- Option for sub-programs.
- The same part can be machined with multiple different machine tools.
- Multiple SolidWorks part configurations can be machined in one assembly document.
- Split instances of same part to generate separate features and operations.



### ▶ Additional Features and Tools

CAMWorks provides numerous integrated features and visual tools to improve productivity including:

- Drag and drop to reorder operations.
- Graphical toolpath generation display.
- Mill and EDM stock shapes can be defined as a bounding box, extruded sketch, STL file or SolidWorks part document. Turning stock can be defined as a bounding box or revolved sketch.
- Material removal simulation can reduce the need for dry runs at the machine tool.
- Step Thru Toolpath command to view toolpath movements.
- Reorder Tool command assigns tool numbers sequentially based on user-defined settings.
- Integrated post processor supports virtually any CNC machine tool.
- Universal Post Generator can be used to customize G-code output.
- API's to customize CAMWorks.

### System Requirements

- Platform: Intel® Pentium® / AMD Athlon™
- RAM: 512MB (1GB recommended)
- 32-bit SolidWorks 2007 or 2008, or CAMWorks Solids 2007 or 2008
- 32-bit or 64-bit Windows® XP Professional
- Microsoft Access 2000, 2002, 2003, 2007

### Machining Modules

CAMWorks modules are available in a variety of bundles or combinations.

- **2½ Axis, 3 Axis, 3 Axis with undercut, 4 Axis and 5 Axis Simultaneous Milling**
- **2 and 4 Axis Turning**
- **Rotary Milling**
- **2 and 4 Axis Wire EDM**

Add-ons: CAMWorks Solids (integrated solid modeler), Machine Simulator, CAMWorks Utilities, SolidProfessor Training CD - SolidWorks Core Concepts & CAMWorks Mill Fundamentals



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